

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1.-7. **(Cancelled)**

8. **(Currently Amended)** A system for generating light at a variety of wavelengths and directing the same along a common axis, comprising:

a plurality of tunable lasers, each of the tunable lasers having a different base wavelength and being tunable therefrom, and each of the tunable lasers being spatially offset from one another;

a grating for receiving the light from each of the spatially offset tunable lasers and directing the same along a common axis, wherein the grating is configured so that when each of the spatially offset tunable lasers is radiating light at its base wavelength, the grating redirects the light from each of the spatially offset tunable lasers along the common axis;

a first thermo-optic prism positioned between the plurality of tunable lasers and the grating for steering the light from each of the spatially offset tunable lasers so that when the spatially offset tunable lasers are tuned so as to generate light at an adjusted wavelength which is different from its base wavelength, the first thermo-optic prism will direct the light from each of the spatially offset tunable lasers into the grating at an angle which compensates for the difference between the adjusted wavelength and the base wavelength so that the light from that laser will emerge from the grating along the common axis, wherein a thermistor is located on a top surface of the first thermo-optic prism for temperature monitoring; and

a second prism positioned between the first thermo-optic prism and the grating, the second prism arranged to correct an aberration introduced by the first thermo-optic prism in order to restore the quality and shape of the light from each of the spatially offset tunable lasers;

wherein the system is configured so that the light from each of the spatially offset tunable lasers is directed through the first thermo-optic prism, then through the second thermo-optic prism, and then into the grating for redirecting the light along the common axis; and

wherein the first and second prism each include first and second faces that are angled with respect to one another, wherein the first face of the first prism is parallel the first face of the second prism and wherein the second face of the first prism is parallel to the second face of the second prism.

9. **(Previously Presented)** A system according to claim 8 wherein the system further comprises a collimating lens positioned after the plurality of tunable lasers and before the first thermo-optic prism.

10. **(Previously Presented)** A system according to claim 8 wherein the system further comprises a focus lens positioned after the grating.

11. **(Previously Presented)** A system according to claim 8 wherein the system further comprises an optical fiber for receiving the light from the grating.

12. **(Cancelled)**

13. **(Currently Amended)** A system for generating light at a variety of wavelengths and directing the same along a common axis, comprising:

a plurality of tunable lasers, each of the tunable lasers having a different base wavelength and being tunable therefrom, and each of the tunable lasers being spatially offset from one another;

a grating for receiving the light from each of the spatially offset tunable lasers and directing the same along a common axis, wherein the grating is configured so that when each of the spatially offset tunable lasers is radiating light at its base wavelength, the grating redirects the light from each of the spatially offset tunable lasers along the common axis;

a first thermo-optic prism positioned between the plurality of tunable lasers and the grating for steering the light from each of the spatially offset tunable lasers so that when the spatially offset tunable lasers are tuned so as to generate light at an adjusted wavelength which is different from its base wavelength, the first thermo-optic prism will direct the light from each of

the spatially offset tunable lasers into the grating at an angle which compensates for the difference between the adjusted wavelength and the base wavelength so that the light from that laser will emerge from the grating along the common axis, wherein a thermistor is located on a top surface of the first thermo-optic prism for temperature monitoring;

a second prism positioned after the grating and arranged to correct an aberration introduced by the first thermo-optic prism in order to restore the quality and shape of the light from each of the spatially offset tunable lasers;

wherein the system is configured so that the light from each of the spatially offset tunable lasers is directed through the first thermo-optic prism, then into the grating for redirecting the light along the common axis, and then through the second thermo-optic prism; and

wherein the first and second prism each have a triangle shape including first and second faces that are angled with respect to one another, wherein the first face of the first prism is parallel the first face of the ~~first~~second prism and wherein the second face of the first prism is parallel to the second face of the second prism.

14. **(Previously Presented)** A system according to claim 8 wherein the first thermo-optic prism further comprises adjustment means for adjusting the temperature of the first thermo-optic prism so as to adjustably steer the optical beam.

15. **(Previously Presented)** A system according to claim 14 wherein the adjustment means comprise at least one selected from a group consisting of heat, an electric field, and a magnetic field.

16. **(Previously Presented)** A system according to claim 8 wherein the plurality of tunable lasers comprises at least 12 tunable lasers.

17. **(Previously Presented)** A system according to claim 13 wherein the system further comprises a collimating lens positioned after the plurality of tunable lasers and before the first thermo-optic prism.

18. **(Previously Presented)** A system according to claim 13 wherein the system further comprises a focus lens positioned after the grating.

19. **(Previously Presented)** A system according to claim 13 wherein the system further comprises an optical fiber for receiving the light from the grating.

20. **(Previously Presented)** A system according to claim 13 wherein the first thermo-optic prism further comprises adjustment means for adjusting the temperature of the first thermo-optic prism so as to adjustably steer the optical beam.

21. **(Previously Presented)** A system according to claim 20 wherein the adjustment means comprise at least one selected from a group consisting of heat, an electric field, and a magnetic field.

22. **(Previously Presented)** A system according to claim 13 wherein the plurality of tunable lasers comprises at least 12 tunable lasers.

23. **(Withdrawn)** A system for generating light at a variety of wavelengths and directing the same along a common axis, comprising:

a plurality of tunable lasers, each of the tunable lasers having a different base wavelength and being tunable therefrom, and each of the tunable lasers being spatially offset from one another;

an input lens positioned to receive light from the lasers and to output a collimated beam;

a first prism having a triangular shape positioned to receive the collimated beam and output a first angularly shifted beam having a larger size than the collimated beam;

a second prism formed of the same material as the first prism and having a triangular shape positioned to receive the first angularly shifted beam and output a second angularly shifted beam, the second prism arranged to correct an aberration introduced by the first thermo-optic

prism in order to restore the quality and shape of the light from each of the spatially offset tunable lasers;

an output lens positioned to receive the second angularly shifted beam and output an output beam directed onto an optical fiber;

a tuning heater in thermal contact with the first prism; and

a controller coupled to the tuning heater and programmed to control power supplied to the tuning heater in order to change an index of refraction of the first prism;

wherein the first and second prism each have first and second faces that are angled with respect to one another, wherein the first face of the first prism is parallel the first face of the first prism and wherein the second face of the first prism is parallel to the second face of the second prism.